

What is claimed is:

Claim 1. An image generating method comprising the following steps:

- 5 (1) a step of receiving environment information acquired by one or a plurality of space measurement sensor attached to a moving body;
- (2) a step of receiving time when the environment information is received, and parameter of the space measurement sensor itself at the time;
- (3) a step of saving history information representing the environment information, the time, and the parameter;
- 10 (4) a step of receiving designation for virtual observation point; and
- (5) a step of generating virtual environment image seen from the virtual observation point based on the saved history information.

Claim 2. The image generating method of claim 1, further comprising the  
15 following steps:

- (6) a step of generating image of the moving body itself seen from the virtual observation point based parameter of the moving body itself.
- (7) a step of generating a composite image including the image of the moving body itself and the virtual environment image, using the virtual  
20 environment image and the image of the moving body itself.

Claim 3. The generating method of claim 1 or claim 2, wherein the environment image is a plurality of still pictures.

Claim 4. The generating method of any one of claim 1 to claim 3, wherein the environment image is moving picture.

5 Claim 5. The generating method of any one of claim 2 to claim 4, wherein the parameter of the moving body itself in step (6) is for "any time point between a time point when a virtual observation point is designated, or close to that time point, to a time point when a generated composite image is presented".

10 Claim 6. The generating method of any one of claim 1 to claim 5, wherein the moving body can propel itself.

Claim 7. The generating method of any one of claim 1 to claim 6, wherein the virtual observation point exists at a position looking at the environment around the moving body and/or the environment around a point the operator wants to see.

15

Claim 8. The generating method of any one of claim 1 to claim 7, wherein the virtual observation point exists at a position looking at the moving body from behind.

20 Claim 9. The generating method of any one of claim 1 to claim 8, wherein the "parameter of the space measurement sensor itself" in step (2) includes "position and attitude of space measurement sensor itself" and/or "data, matrix or table representing a relationship between data space acquired by the space sensor itself and real space".

Claim 10. The generating method of any one of claim 1 to claim 9, wherein "generating based on history information" in step (5) is "selection of any image contained in the environmental information based on closeness of position of the space measurement sensor itself at the time the environmental information is acquired, and the virtual observation point".

Claim 11. The generating method of any one of claim 1 to claim 9, wherein the "generation based on history information" in step (5) is "new generation based on history information".

Claim 12. The generating method of any one of claim 1 to claim 11, wherein the virtual environment image is still picture.

Claim 13. The generating method of any one of claim 2 to claim 12, wherein the image of the moving body itself contained in the composite image of step (7) is a semi-transparent image, a transparent image, or a wireframe image.

Claim 14. The generating method of any one of claim 2 to claim 13, wherein position of the moving body is included in the parameter of the moving body itself.

Claim 15. The generating method of claim 14, wherein attitude of the moving body is further included in the parameter of the moving body itself.

Claim 16. A presentation method for presenting a composite image generated using any one of the methods of claim 2 to claim 15.

5 Claim 17. An image generating system, comprising a moving body, a control section and an information acquisition section, the moving body being provided with space measurement sensor for acquiring environment information, wherein the control section carries out the following functions:

(a) a function of saving history information representing the  
10 environmental information, the time when the environmental information was acquired, and parameter of the space measurement sensor it self at the time the environmental information was acquired;

(b) a function of receiving information for designated virtual observation point; and

15 (c) a function of generating virtual environment image seen from the virtual observation point based on the saved history information.

Claim 18. The image generating system of claim 17, further comprising an information acquisition section, the information acquisition section being for  
20 acquiring parameters of the moving body itself, wherein the control section further carries out the following functions:

(d) a function of generating image of the moving body itself seen from the virtual observation point based on parameter of the moving body itself;

(e) a function of generating a composite image including an image of the

moving body and the virtual environment image, using the virtual environment image and the image of the moving body itself.

5      Claim 19. A computer program for causing a computer to execute the steps of any one of the methods of claim 1 to claim 16.

Claim 20 A computer program for causing a computer to execute the function of the control section of claim 17 or claim 18.

10      Claim 21. Data containing information representing the virtual environment image or the composite image generated using any one of the generating methods of claim 1 to claim 15.

Claim 22. A storage medium for storing the data of claim 21.

15